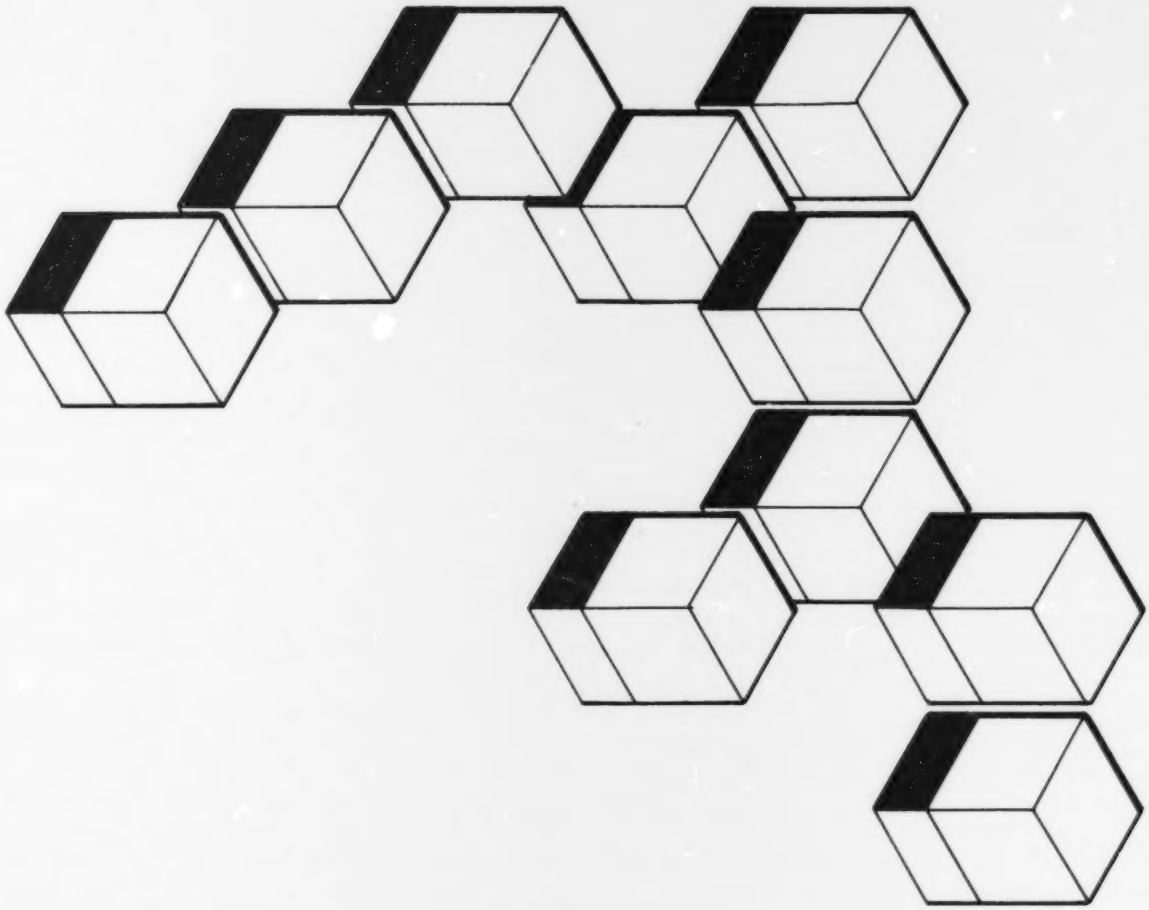
Agdex 641

Addendum to the *1983 Guide to Chemical Weed Control*



MANITOBA
AGRICULTURE

By Authority of Hon. Bill Uruski
Minister of Agriculture
Province of Manitoba

FOREWORD

The Addendum contains updated recommendations based on changes to herbicide registrations or new registrations approved since the 1983 Guide was printed. Use this Addendum as a supplement to the 1983 Guide.

SUMMARY BY CROP OF ADDENDUM CONTENTS

(see page 13 for other changes)

Herbicide	Crops	Weeds
Avenge 200 C	Fall rye, triticale, winter wheat, alsike clover (See varietal restrictions)	Wild oats
Buctril M	Corn, bromegrass, crested wheatgrass, intermediate wheatgrass, slender wheat grass, tall wheatgrass, Russian wild ryegrass, timothy, orchardgrass, creeping red fescue, meadow fescue, reed canarygrass plus crops listed on Table 16 of the 1983 Guide.	Kochia, cocklebur, and weeds listed on Table 16 of the 1983 Guide.
Buctril M + TCA	Barley	Green Foxtail plus weeds listed for Buctril M on Table 16 of the 1983 Guide.
Hoe-Grass II	Barley (see varietal restriction), flax, wheat (spring and durum).	Wild oats, green and yellow foxtail, barnyard grass, volunteer corn, wild buckwheat, tartary buckwheat, annual smartweed species (including lady's thumb), kochia, common groundsel, cow cockle, wild mustard, stinkweed, lamb's quarters, red root pigweed and Russian thistle.
Karmex	Farm ponds and dugouts	Algae and submergent aquatic weeds
Laddok	Corn	Black nightshade, lamb's quarters, red root pigweed, purslane, common ragweed, Russian Thistle, corn spurry, flower-of-an-hour, common groundsel, giant ragweed, annual smartweed species (lady's thumb), wild mustard, cocklebur, and common chickweed.

Herbicide	Crops	Weeds
Lexone L/DF	Potatoes, Lentils, fababeans	Weeds Listed on Table 16 of the 1983 Guide.
Magnum 40 EC	Wheat, barley, rapeseed (Canola), sunflowers, mustard, fababeans crambe, field and canning peas, black beans, soybeans and some shelterbelt species.	See list for Treflan in Table 16 of the 1983 Guide.
Mataven	Sunflowers	Wild oats.
Pardner	Bromegrass, crested wheatgrass, intermediate wheatgrass, slender wheatgrass, tall wheatgrass, Russian wild ryegrass, timothy, orchardgrass, creeping red fescue, meadow fescue, reed canarygrass and crops listed on Table 16 of the 1983 Guide.	Cocklebur, common ragweed, kochia and weeds listed on Table 16 of the 1983 Guide.
Poast	Rapeseed (Canola), flax, sugar-beets, soybeans	Green foxtail, yellow foxtail, proso millet, barnyard grass, wild oats, volunteer wheat, volunteer barley, volunteer oats, volunteer corn and witchgrass.
Primextra	Irrigated corn	See Table 3 of the 1983 Guide.
Sencor	Wheat and barley	Common groundsel, henbit, night flowering catchfly, Russian thistle, wormseed mustard, chickweed, annual smartweed species (lady's thumb), lamb's quarters, red root pigweed and suppression of hemp nettle plus weeds listed on Table 16 of the 1983 Guide.

Herbicide	Crops	Weeds
Stampede 360 + 2, 4-D amine or LV ester	Wheat, spring and durum	Russian thistle plus weeds listed for Stampede CM in Table 16 of 1983 Guide.
Sutan + 8E plus Bladex	Corn	Barnyard grass, crabgrass, green foxtail, yellow foxtail, witch grass, annual smartweed species (lady's thumb), lamb's quarters, wild mustard, purslane, common ragweed, shepherd's purse, black nightshade, wild buckwheat, giant ragweed and Indian mustard.

AVENGE 200C

Fall rye (Cougar, Puma, Frontier, Rymin, Kodiak), triticale (Welsh) and winter wheat (Northstar, Sundance)

Apply 3.5 to 4.25 L/ha in 100 L water. Use the higher rate when there are more than 200 wild oats per square metre. Apply when wild oats are in the 3 to 5 leaf stage and before the crop is past the 6 leaf stage. Avenge may be applied by air in a spray volume of 20 to 50 L/ha. Do not tank mix Avenge with broadleaf herbicides on these crops. Avenge is also recommended for use on seedling alsike clover. Refer to application instructions for Avenge on red and sweet clover (pages 47-48 of the 1983 Guide).

BUCTRIL M

Corn, seedling forage grasses

In corn apply 1.25 L/ha in 200 to 300 L water at a pressure of 275 kPa. Apply when corn is in the 4 to 6 leaf stage.

In seedling forage grasses apply 1.25 L/ha in 150 L water at a pressure of 275 kPa. Apply when grasses are in the 2 to 4 leaf stage. Do not graze or harvest for livestock feed in the year of application.

Buctril M should be applied when weed seedlings are in the 2 to 4 leaf stage. Refer to the 1983 Guide for additional information on Buctril M.

BUCTRIL M + TCA

Barley

Apply 1.25 L/ha Buctril M with 1.75 L/ha TCA solution or 1.34 kg/ha product NaTA TCA in 100 L water when the crop is in the 2 to 4 leaf stage and the weeds have emerged. Add TCA to the spray tank first. Avoid overlapping. Do not apply on barley seeded less than 5 cm deep. Some delay in barley maturity may occur. See the 1983 Guide for additional information on these products.

H O E - G R A S S II

Barley, flax, wheat (spring and durum).

Apply 3.5 L/ha in not less than 110 L water with nozzles directed 45° forward, and at a minimum nozzle pressure of 275 kPa. Use of 80° flat fan nozzles is recommended. Ground speed should be 6 to 8 km/h.

Apply when wild oats, foxtail and barnyard grass are in the 1 to 4 leaf stage and before tillering, when volunteer corn is 15 to 25 cm in height, when Russian thistle is up to 5 cm in height and when other broadleaf weeds are up to the early 4 leaf stage.

Apply when barley is in the 1 to 4 leaf stage and before tillering (stooling). Application beyond this stage will result in crop damage. Certain environmental conditions should be avoided when applying Hoe-Grass II on barley, i.e. prolonged cool, humid periods, drought and frost. As with Hoe-Grass, application to Klages, Betzes, Norbert or Glenn barley is not recommended.

Apply when flax is 5 to 10 cm in height. Do not apply to flax under stress due to hot (28° C) or humid weather.

Restrictions

1. do not graze treated fields prior to harvest.
2. do not apply if rainfall is expected within one hour after application.
3. do not tank mix with any other pesticide, fertilizer or chemical additives.
4. do not use floodjet type nozzles or controlled droplet applicators.
5. do not apply by air.
6. do not apply within 60 days of harvest.
7. do not treat crops underseeded to forage legumes.

K A R M E X

Farm ponds and dugouts.

Apply 6.25 to 25 kg per hectare-metre to control algae and aquatic weeds such as pondweed, duckweed and chara. Use the lower rate for algae control and the higher rates for aquatic weeds and extended algae control. Use only in ponds with little or no water flow-through.

For a dugout 21 m x 61 m x 1 m deep, apply 800 to 1600 grams Karmex for algae control. For submergent aquatics apply 2.4 to 3.2 kg Karmex. For deeper water, increase rate proportionally.

Do not use in domestic water supplies. Do not use treated water for irrigation within one year of treatment. Do not use if desirable trees or shrubs have roots extending to the water.

Use instructions are contained in a DuPont bulletin which is a supplement to the label. Ask for this bulletin if Karmex is to be used in farm ponds or dugouts. The required information is not on the label.

$$\text{Hectare-metres} = \frac{\text{Width (m)} \times \text{Length (m)} \times \text{Average Depth (m)}}{10\ 000}$$

L A D D O K

Corn

Apply 3 to 4 L/ha in 200 to 400 L water at a minimum of 275 kPa pressure. Do not use floodjet type nozzles. Use the 3 L/ha rate for control of annual smartweed species (lady's thumb) 2.5 to 7.5 cm high, wild mustard 2.5 to 12.5 cm high, cocklebur 7.5 to 17.5 cm high and flower-of-an-hour 2.5 to 5 cm high. Use the 4 L/ha rate for control of annual smartweed species (lady's thumb) 7.5 to 20 cm high, wild mustard 12.5 to 25 cm high, cocklebur 17.5 to 30 cm high, flower-of-an-hour 5 to 10 cm high and seedlings of other susceptible weeds. This treatment will not control green foxtail. All applications should include Assist Oil Concentrate at 1 L/100 L of spray solution. Laddok contains atrazine. Plant only corn, flax, peas or fababeans the year following Laddok application. Do not apply if rain is expected within 8 hours of application.

LEXONE L / DF

Both formulations of Lexone have received registration for use on potatoes, lentils and fababeans, with use recommendation similar to those for Sencor on these crops. See the 1983 Guide for application instructions for both Lexone and Sencor. Crops, rates and mixtures are outlined in the following table.

Crop	Application Rate Lexone L	Lexone DF	Tank Mixed With
Potatoes (dryland, postemergence)	550 mL/ha	350 g/ha	-
Potatoes (dryland, PPI)	550 - 850 mL/ha	350 - 550 g/ha	Eptam 8-E 4.25 - 5.5 L/ha
Lentils, postemergence	440 mL/ha	280 g/ha	-
Fababeans			
- spring PPI	550 - 850 mL/ha	350 - 550 g/ha	Treflan 545 g/L 1.5 - 2 L/ha
- fall PPI	625 - 850 mL/ha	400 - 550 g/ha	Treflan 545 g/L 2 - 2.6 L/ha

Where a rate range exists, use the lower rate on lighter soils (low in clay or organic matter) and the higher rates on heavier soils. Do not use on sandy loam, loamy sand or sand as crop injury may result.

Preplant treatments are not recommended for use on muck, peat or other organic soils, on wet soils (mineral or organic), on soils in poor working condition or on soils subject to prolonged periods of flooding.

Seedling disease, cold weather, deep planting (more than 5 cm), excessive moisture, high soil pH (above 7.4), high salt concentration or drought may weaken seedlings and increase possibility of crop injury; under these conditions delayed crop development or reduced yields may occur.

MAGNUM 40 EC

This product contains trifluralin, the same active ingredient as Treflan EC. The concentration is 400 g/L. See table below for recommended crops and rates. Other instructions are the same as for Treflan EC except that the first incorporation must be completed within eight hours. Note that Magnum is not recommended on lentils or tank mixed with Sencor on fababeans.

Crop and Timing	Magnum (400 g/L) Rate (L/ha) Light Soils*	Medium or Heavy Soils**
Spring, PRE-I (alone or tank mixed with Avadex BW)		
wheat, barley	1.5	2 (use 1.5 L/ha on medium soils)
Spring, PPI		
rapeseed (Canola), sunflowers mustard, fababeans, crambe, field and canning peas, black beans and soybeans	2	2.75
shelterbelts (caragana, green ash and Scotch pine)	5.5	11
Fall, PPI (after September 1)		
rapeseed (Canola), sunflowers mustard, flax, field and canning peas, fababeans and black beans	2.75	3.5
Summer, PPI (June 1 to September 1)		
rapeseed (Canola), flax	4.25	4.25

*sand, sandy loam with less than 6% organic matter.
**loam, silt loam, silt, sandy clay loam, silty clay loam, clay loam, silty clay, all soils with 6 - 15% organic matter.

M A T A V E N

Sunflowers.

Apply Mataven at 5 to 6.5 L/ha broadcast or 6.5 L/ha as a band application in 100 L water at a minimum nozzle pressure of 300 kPa when the majority of the wild oats are in the three to six leaf stage and before the crop forms a canopy. Mataven may be applied by air in a minimum of 20 L/ha of water. Additional application instructions for Mataven are contained in the 1983 Guide.

Mataven is also registered for use on seedling crested wheatgrass. Refer to the Seedling Forage Grasses Section of the 1983 Guide for application instructions.

P A R D N E R

Seedling forage grasses

Apply 1.25 to 1.5 L/ha in 150 L water at a pressure of 275 kPa. Use the higher rate to control heavy weed infestations. Apply when forage grasses are in the 2 to 4 leaf stage and when weeds are in the 2 to 4 leaf stage. Do not graze or harvest treated crops for livestock feed during the year of treatment. Refer to the 1983 Guide for additional information on Pardner.

P O A S T

Flax, rapesed (Canola), soybeans, sugarbeets

Apply 0.8 to 1 L/ha for control of green and yellow foxtail, barnyard grass, proso millet, witchgrass and volunteer corn; 1.4 to 1.6 L/ha for control of wild oats; 1.6 L/ha for control of volunteer wheat and volunteer oats and 1.9 L/ha for volunteer barley. Where a rate range is specified for a weed, use the higher rate for control of heavy infestations. Apply in 50 to 250 L/ha water with a minimum nozzle pressure of 240 kPa. Include Assist Oil Concentrate at 0.75 to 2 L/ha. Use the higher rate when applying the higher recommended water volumes. Apply when weeds are in the 1 to 6 leaf stage and preferably when the majority of the weeds are in the 2 to 5 leaf stage. Do not apply using floodjet or hollow cone nozzles. Do not apply if rain is expected within one hour of application. Do not graze or cut treated crops for feed prior to crop maturity.

Poast may be applied by aircraft in 25 to 50 L/ha of water with 0.75 to 1 L/ha of Assist Oil Concentrate and a minimum nozzle pressure of 275 kPa.

Poast may be tank mixed with Brominal M, Bromox 450 M, Buctril M, MCPA ester or MCPA amine for use in flax only. If weeds are not actively growing at the time of application, some reduction in grassy weed control may be encountered. This reduction will be greater with amine formulations than with ester formulations of MCPA, and will be most evident at the lower rates of Poast application. Allow a four day interval between application of Poast and any other herbicides.

P R I M E X T R A

Irrigated corn only.

Apply 6.7 to 8.5 L/ha in a minimum of 150 L water after seeding but before crop or weed emergence. Use the higher rate for heavy weed infestations. Rain or irrigation of at least 1.25 cm is required within 7 days following application for satisfactory results. This product contains atrazine and may leave a residue in the soil. See the caution note at the beginning of the corn section of the 1983 Guide.

S E N C O R

Wheat and barley

Sencor 500 at 275 mL/ha may be used for control of stinkweed, volunteer rapeseed, wild mustard, chickweed, annual smartweed species (lady's thumb), lamb's quarters, red root pigweed and for suppression of hemp nettle.

In addition to the weeds listed in Table 16 of the 1983 Guide Sencor 500 at 425 mL/ha will control common groundsel, night flowering catchfly, and wormseed mustard. The 550 mL/ha rate will also control henbit and Russian thistle.

Klondike barley is less tolerant to Sencor than other barley varieties. Temporary lightening of crop colour may be expected and crop height may be reduced. To minimize injury to Klondike barley apply Sencor 500 at 275 to 425 mL/ha alone or apply 275 mL/ha Sencor 500 tank mixed with MCPA. Do not apply Sencor plus Banvel or Sencor plus 2,4-D combinations to Klondike barley.

STAMPEDE 360 + 2,4-D

Wheat only (spring and durum)

Stampede 360 can be tank mixed with 2,4-D amine or LV ester to control weeds susceptible to Stampede CM or Stampede 360 + MCPA ester, plus Russian thistle. Apply 2.75 L/ha Stampede 360 tank mixed with 800 to 1200 mL/ha 2,4-D LV ester (500 g/L) or with 1.2 L/ha 2,4-D amine 500. If other concentrations of 2,4-D are used, apply equivalent amounts of active ingredient. Add 2,4-D to spray tank prior to adding Stampede 360. Apply at the 3 to 5 leaf stage of wheat. See 1983 Guide for other recommendations for application of Stampede 360.

SUTAN + 8-E PLUS BLADEX

Corn

Apply 5.5 L/ha Sutan + 8-E tank mixed with 2.5 to 2.75 kg/ha Bladex 80 WP or 4.2 to 4.7 L/ha Bladex liquid prior to planting and incorporate within minutes. Use only on light and medium textured soils. Refer to the Herbicide Information Section of the 1983 Guide for incorporation instructions. Sutan + plus Bladex may be applied with liquid fertilizer or on dry granular fertilizers. See the Herbicide Information Section of the 1983 Guide for specific instructions regarding application and use on dry fertilizer.

Bladex may leave a residue in the soil. Plant corn, cereals, potatoes, flax, rapeseed (Canola), sunflowers, soybeans, fababeans, or peas the year following Bladex application. Carryover will be greater on heavier textured soils and under dry conditions. Residue carryover following repeated applications of Bladex (two or more consecutive years) has not been fully evaluated and could result in damage to sensitive crops such as rapeseed (Canola) or sunflowers.

OTHER CHANGES

BASAGRAN

Basagran will control common groundsel and flower-of-an-hour in addition to the weeds listed in Table 16 of the 1983 Guide.

BROMINAL M

The concentration of new product has increased from 400 g/L to 450 g/L. The 450 g/L material should be applied at a rate of 1.25 L/ha. All other instructions remain as in the 1983 Guide. Be sure to check product concentration on the label.

COBUTOX

Cobutox at the reduced rate of 2 L/ha may be tank mixed with MCPA sodium salt at 117 mL/ha to improve control of wild mustard beyond the four leaf stage in seedling alfalfa or birdsfoot trefoil, alone or with a barley, oats, or wheat cover crop. This tank mix may increase crop damage.

DRIAMINE 2,4-D SG

This water soluble granule formulation of 2,4-D can be used wherever 2,4-D amine 500 is recommended in the 1983 Guide. Do not mix as a pre-slurry, add directly to the spray tank according to label directions. This product is 80% active. The following rates are equivalent to recommended volumes of 2,4-D amine 500:

L/ha 2,4-D amine 500	Kg/ha Driamine 2,4-D SG
0.7 (700 mL/ha)	0.44 (438 g/ha)
1.25	0.78 (781 g/ha)
1.7	1.1
2.25	1.4

GLEAN

Glean has a temporary registration for use on wheat and barley in the Prairie Provinces. The 1983 label restricts use to fields intended only for continuous production of wheat or barley, and where soil pH is less the 7.5. If soil pH is between 7.0 and 7.5, only wheat can be grown the year following treatment. A field bioassay is required the year before rotating to other crops. Corn and broadleaf crops are sensitive to Glean residues.

Glean is not recommended for use in Manitoba because of the serious restrictions on crop rotation for several years after application. Label information and field bioassay procedures are available from DuPont representatives, ag reps and weed supervisors.

NOTE:

The cropping sequence permitted by the 1983 Glean label is more restrictive than on the original label issued in 1982. Previous users should contact DuPont representatives for information on the changes.

NORTRON

Changes in Nortron write-up on page 40 of the 1983 Guide. The correct concentration of Nortron is 180 g/L. Rate of application remains the same.

TORDON 202C

A recent label change extends the recropping restriction from one to two years. During two years following application fallow or replant to wheat, oats, barley, flax or rapeseed. See the 1983 Guide for a listing of sensitive crops. Damage to sensitive crops can be expected the first year after use and may, under some circumstances, occur in the second year. Further research may define these conditions.

TREFLAN

Change in Treflan write-up on page 99 of 1983 Guide. The rate of 400 g/L material equivalent to 3 L/ha of 545 g/L Treflan is 4.1 L/ha.

HERBICIDE CONCENTRATION AND FORMULATION

SYMBOLS

EC - emulsifiable concentrate
F - flowable
g/L - grams per litre

TRADE NAME	GENERIC NAME	CONCENTRATION & FORMULATION	MANUFACTURER
Driamine 2,4-D SG	2,4-D Amine	80%	Uniroyal
Glean	chlorsulfuron	75% dry flowable	DuPont
Hoe-Grass II	diclofop methyl bromoxynil (ester)	230 g/L + 80 g/L EC	Hoechst
Laddok	atrazine bentazon	200 g/L + 200 g/L F	BASF
Magnum	trifluralin	400 g/L EC	Uniroyal
Poast	sethoxydim	184 g/L EC	BASF

See Table 15 of 1983 Guide for other products.